APPENDIX A

CROSS-SUBSIDY CONCERNS RAISED BY LOCAL EXCHANGE CARRIER PROVISION OF VIDEO DIALTONE SERVICES

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APPENDIX 1

EXECUTIVE SUMMARY

Local Exchange Carrier entry into the Video Dialtone business will alter networks in fundamental ways. Investment and expenses will grow by substantial amounts as a result. Unless the Federal Communications Commission modernizes its rules and policies to reflect the impact of Video Dialtone on LEC networks, costs will be misallocated. The impact on telephone ratepayers could amount to tens of billions of dollars in unjustified rate increases. Jurisdictional cost misallocations could exceed 50 billion dollars.

Adding Video Dialtone capability to the local exchange is not simply a matter of plugging some new equipment into existing network interfaces. Video Dialtone requires substantial network changes, including extending fiber optic transmission systems into the existing local loop plant. These costs must be identified and attributed to Video Dialtone service. If this is not done properly, the prices of existing basic telephone services will rise -- or fail to fall as much as they otherwise would.

The Commission has in place a set of rules and policies that are supposed to prevent cost misallocations. Unfortunately, in their current form, these rules and policies are inadequate to the task. The Uniform System of Accounts in Part 32 of the Commission's Rules does not adequately track investments and expenses for today's narrowband network. The changes brought on by Video Dialtone will exacerbate this problem. The Commission has declared that Video Dialtone is an interstate service, but has made no provision to insure that the Part 36 Separations Manual allocates the proper amount of costs to the interstate jurisdiction. As it stands now, the Separations Rules will allocate 75 percent of the incre-

mental Video Dialtone fiber costs to the intrastate jurisdiction even though all of the revenues will be interstate.

The Part 64 Joint Cost Allocation Rules are of little help. These Rules do not address the issue of how costs are allocated among regulated services, and the bulk of Video Dialtone costs will be associated with regulated broadband transmission service. The fully distributed costing rules in Part 64 are supposed to protect regulated ratepayers from bearing an undue burden of investment and expenses associated with unregulated services. In practice, these Rules allow expenses incurred to benefit unregulated services to be recovered from the consumers of regulated services.

The Commission's Price Cap Rules will also fail to prevent cost-misallocation. Pure price-based regulation prevents cross-subsidy in theory. In practice, both state Commissions and the FCC have necessarily retained significant rate of return constraints on the LECs. These constraints provide incentives for cross-subsidization. The failure of Price Caps to provide adequate consumer safeguards is reflected in recent Commission decisions to basically start from scratch when addressing costing and pricing issues for ONA Basic Service Elements and Switched and Special Access Transport.

LECs argue that accounting rules are irrelevant to the economic costing and pricing of Video Dialtone Services. However, cost allocation in the telephone business has real economic effects. LECs are allowed to recover their costs, and those costs are defined by state and federal regulatory accounting rules and procedures. If costs of providing Video Dialtone are assigned or allocated to other services, the rates for those services will be higher as a result.

If basic telephone consumers are to be protected from financing LEC entry into Video Dialtone, substantial changes must be made to the existing rules. New Part 32 Accounts must be created, Separations and Joint Cost Allocation Rules must be revised, and both Price Cap Rules and the Part 69 Access Charge Rules must be modified to Accommodate Video Dialtone.

This Report was prepared by Hatfield Associates, Inc. in response to a National Cable Television Association request to identify changes in accounting and cost allocation rules necessary in light of Local Exchange Carrier provision of Video Dialtone services.[1]

I. INTRODUCTION

The Video Dialtone Section 214 Applications on file at the Federal Communications Commission demonstrate that comprehensive changes to existing rules and policies are required to protect consumers. Local Exchange Carriers (LECs) have an overwhelming incentive to finance their entry into the Video Dialtone business through cost misallocations that will harm ratepayers and reduce economic efficiency. Existing safeguards are inadequate to prevent LECs from acting on these incentives. Therefore, there is a substantial risk that cost misallocations will occur unless current rules and policies are modified to reflect LEC participation in the broadband video transmission business.

Cost misallocations can have serious negative implications for both competition in the video transmission business and for the prices of telephone service. Estimates of the cost of upgrading copper loops to fiber in order to provide a nation-wide fiber optic network are difficult to make. The Commission has not undertaken the necessary comprehensive review of this important issue. However, based on the limited data that are available, investment over the next 15 to 20 years would likely exceed 100 billion dollars and could easily be as high as 200 billion dollars.[2]

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[1] A description of Hatfield Associates, Inc. and brief biographies of the principle contributors to this Report are attached.

[2] These estimates are discussed in Section V below.

Most of the fiber investment involves loop costs and associated electronics. The existing Jurisdictional Separations rules would assign 75 percent of the fiber loop costs, but none of the associated Video Dialtone revenues, to the intrastate jurisdiction. As explained in Section V below, jurisdictional cost misallocation of fiber investments could cause local revenue requirements increases in the range of 28.5 to 57 billion dollars. Rates for local telephone services would obviously be impacted. One recent study found that accelerated broadband investment using a fiber-to-the-home architecture could raise local rates by 20 dollars per month.[3]

This paper examines the Video Dialtone cost allocation issue and describes the changes that must be made to existing Commission policies and rules in order to protect ratepayers. Section II examines the incentives and ability of LECs to misallocate costs. Section III explains why existing safeguards are inadequate. A description of the required rule changes is provided in Section IV. A discussion of the cost of deploying fiber is contained in Section V. The Appendix discusses the steps necessary to equip the local exchange for broadband video transmission capability.

II. LECS HAVE THE INCENTIVE AND ABILITY TO MISALLOCATE COSTS

This Section describes LEC incentives to misallocate Video Dialtone costs and explains how those cost misallocations can be accomplished. The relationship between cost misallocation and cross-subsidy is also discussed.

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[3] See Page Montgomery, Accelerated Broadband Networks: The Costs and Risks, February, 1992, p. 29. A copy of this study was filed with the Reply Comments of the Commonwealth of Pennsylvania Office of Consumer Advocate in the Reply round of the Video Dialtone Proceeding, CC Docket No. 87-266, March 4, 1992. Pennsylvania Bell has not disputed the results.

A. Incentives to Misallocate Costs

LEC incentives to misallocate costs stem from several sources. First, underpricing their own broadband transmission services would harm existing providers or other potential entrants, such as cable, wireless cable (MMDS) and Direct Broadcast Satellite. As a result, LECs would capture broadband transmission market share, even if they are not the most efficient providers. At the same time, monopoly service prices would be increased or price reductions for these services would be avoided or reduced. Second, the cable companies and their increasingly sophisticated fiber networks present a potential threat to the LEC monopoly over narrowband transmission. This provides LECs with a powerful incentive to slow the growth and development of the cable industry.[4]

These incentives are the classic result of the combination of regulation and monopoly. In short, monopolists that face regulatory constraints have powerful incentives to evade regulation and manipulate existing rules in order to increase their profits and protect or expand their monopoly ratebase.[5] Seen in this light, potential problems with Video Dialtone

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[4] If the LECs are allowed to provide programming services of their own, they would compete directly with other users of the common carrier facilities and would have an incentive to use their control over gateways and underlying transmission facilities to disadvantage these customers. Even if the LECs do not provide programming, under a Video Dialtone model, the gateway will be used to provide access to both LEC and independent narrowband services, potentially providing the LECs with incentives to disadvantage non-LEC users of the gateway. However, the focus of this report is on broadband services.

[5] See Tim Brennan, "Cross-Subsidization and Cost Misallocation by Regulated Monopolists," Journal of Regulatory Economics (1990), pp. 37-51 for a discussion of incentives created by monopoly regulation.

are only new to the extent that LEC entry into broadband video transmission is a relatively new phenomenon.[6]

Another powerful anticompetitive tool in the possession of LECs is discrimination -- the ability to prevent competitors that are dependent on monopoly facilities from effectively utilizing them. While discrimination is a real concern in the context of Video Dialtone, this paper emphasizes the cost allocation issue.[7]

B. The Ability to Misallocate Costs

There are a number of ways for an LEC to misallocate costs. An LEC providing both regulated monopoly and competitive or potentially competitive services can increase its profits if the costs of providing unregulated services can be attributed to monopoly services. For example, assigning employees of the regulated operation to work on projects that will primarily benefit unregulated services can be used to misallocate costs.[8] Costs can also be misallocated among state jurisdictions and between the federal jurisdictions and the states.

Cross-subsidies can also be built into the design and construction of the telephone network. For example, a particular network architecture might be adopted not because it is

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[6] The enormous dollar amounts potentially involved distinguishes Video Dialtone from other cost misallocation issues.

[7] See Hatfield Associates, Inc., "The Economics and Technology of Video Dialtone: Inherent Problems and Necessary Safeguards," filed in Telephone Company-Cable Television Cross-Ownership Rules, CC Docket No. 87-266, March 4, 1992, for a discussion of discrimination issues raised by Video Dialtone.

[8] For example, the Commission has found that inside wire costs were inappropriately assigned to the regulated category. See "More than $181,000,000 in Revenue Requirement Disallowances Called for in Year-End Order on LECs' 1988 Access Tariffs; FCC Chides LECs for Cost, Demand Inconsistency," Telecommunications Reports, January 10, 1989, p. 13.

the most efficient way to provide services used by local ratepayers, but because it provides the best foundation for future competition in related markets or for providing unregulated services. If any of the costs of such network upgrades are assigned to the local residential service revenue requirement, cross-subsidy has occurred. Similarly, costs for providing competitive services could be embedded in the research and development activities funded by ratepayers.[9] In general, regulated firms who must allocate costs between regulated and unregulated, or competitive and non-competitive, services may have an incentive to adopt technologies with high common costs to increase the total cost burden on monopoly services.[10]

Costs may also be misallocated intertemporally. Accelerated depreciation can be used to justify lower prices in the future when competition might be expected to grow. Similarly, depreciation might be accelerated for facilities used to provide monopoly services in order to generate cash flow to construct facilities that might be subject to more competition.

These various strategies for cost misallocation vary from being direct and easily detectable to being subtle and correspondingly difficult to detect. However, even direct and otherwise detectable cross-subsidies may result if regulators do not revise their cost allocation

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[9] From a broad public policy perspective, regulators may consider some cross-subsidies to be desirable. For example, regulators may have goals other than maximizing competition or economic efficiency. Even in these situations, keeping track of actual costs is important in order to provide subsidies in the most efficient way possible and to ensure that it is the regulators, and not the regulated company, that is passing out the subsidies. Regulated enterprises should not unilaterally implement cross-subsidies. Clear regulatory review, understanding and authority are required.

[10] The classic reference is Ken Baseman, "Open Entry and Cross-Subsidization in Regulated Markets," in Gary Fromm, ed., Studies in Public Regulation (1981), pp. 329-60.

rules as technology and markets change. In other words, failure to keep accounting rules current may itself encourage cross-subsidy. As discussed below, in some cases the existing outdated rules will attribute video transmission costs to telephone services.

C. Cost Misallocation in the Context of Video Dialtone

To bring the discussion down to the specifics of the Video Dialtone business, several LEC cost misallocation strategies are possible. First, to the extent the costs of designing, building, operating and maintaining a broadband transmission network can be attributed to plain old local telephone service, basic business, residential, intraLATA long distance and exchange access customers are at risk of paying higher prices for those services than they otherwise would.[11] Second, to the extent the costs of the regulated gateway can be attributed to other basic services, the use of the LEC gateway will be subsidized. Third, to the extent that costs of the unregulated second-level gateway can be attributed to the regulated gateway or other regulated services, then the LEC services provided over that gateway will be subsidized. Finally, to the extent the costs of providing the actual information services provided by the LECs, including video services if the cross-ownership ban is lifted, can be attributed to regulated services, then these unregulated services will be cross-subsidized.

It is, of course, unlikely that all of these various forms of cross-subsidy will be implemented simultaneously. The actual strategy selected would be a function of a variety of factors, including demand elasticities, the degree of competition faced by the LEC in various markets, and the relative effectiveness of regulation to prevent particular strategies. For

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[11] As discussed in the Appendix, there may well be diseconomies associated with the provision of video services over the existing narrowband network. Obviously, to the extent this is true, the risk of cross-subsidy is greater.

example, if the LEC's choose to use underpriced common carrier transport to compete anticompetitively against cable systems, they may well decide to underprice gateway services as well, precluding a subsidy from gateway services to the LEC information services.

D. Cost Misallocation and Cross-Subsidy

Cost misallocation is one tool used to implement a cross-subsidy. A cross-subsidy occurs when the price of a service is set below properly measured incremental cost. LECs have attempted to obfuscate the pricing issue by maintaining that traditional cost allocation mechanisms used by state and federal regulators are irrelevant to costing issues. This LEC argument is incorrect.

Cost allocation in the telephone business has real economic effects. LECs are allowed to recover their costs, and those costs are defined by the state and federal regulatory accounting rules and procedures. If costs of providing Video Dialtone are assigned or allocated to other services, the rates for those services will be higher as a result. Only comprehensive, up-to-date accounting rules and procedures will minimize cost misallocations that will burden ratepayers and reduce economic efficiency.[12] Finally, costs of developing and providing a technical platform for Video Dialtone have undoubtedly already been booked in regulated company accounts. These costs must be identified and removed from the revenue requirements for telephone services.

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[12] Professor Wenders is simply wrong when he argues that "...costs cannot be allocated." The Economics of Telecommunications: Theory and Policy (1987), p. 59. Costs are allocated by regulators and those allocations affect the prices that consumers pay. As Kenneth Boulding pointed out, "anything that exists is possible."

The Video Dialtone Section 214 Applications pending at the Commission demonstrate how improper incremental cost concepts and studies can generate cross-subsidies. The existing LEC networks are taken as the base from which incremental costs are measured, resulting in a zero incremental cost for fiber optic transmission in the feeder plant and between offices.[13] This is an absurd result.

The amount of fiber required if Video Dialtone is to be provided will be larger than that required for narrowband applications.[14] As Alfred Kahn points out, when two services use common plant, the incremental cost of both services includes a portion of the common costs.[15] If deployment of fiber in the feeder plant has been accelerated not because it will lower the cost of providing voice services, but to allow for provision of video transport service, then a substantial portion of existing fiber feeder investment should be allocated to Video Dialtone service. Similarly, to the extent interoffice or feeder transmission plant has already been engineered to provide capacity for video applications, an appropriate portion of that plant must be identified and allocated to Video Dialtone services.

Additional costs of providing Video Dialtone are described below, but the point to be made here is that the Commission's cost allocation tools must be revised in order to identify the costs of Video Dialtone and prevent ratepayers from subsidizing LEC entry into the broadband video business. Any other result would imply that ratepayers must pay more for

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[13] See, for example, In the Matter of the Application of New Jersey Bell Telephone Company, W-P-C 6840, filed December 15, 1992.

[14] See David P. Reed, Residential Fiber Optic Networks: An Engineering and Economic Analysis (1992), Appendix B, cited in the Affidavit of Leland Johnson responding to the Application of New Jersey Bell Telephone Company, W-P-C 6840, February 12, 1993.

[15] See The Economics of Regulation (1970), Vol. I, p. 78.

monopoly services simply because the LEC made the choice to compete with cable companies for the provision of video transport. This is clearly wrong from the standpoint of both efficiency and equity.

III. THE EXISTING COST ALLOCATION RULES ARE INADEQUATE

The Commission has accounting safeguards in place that are supposed to prevent cross-subsidies. Unfortunately, there are many problems with the existing safeguards. The rules under which costs are allocated to services have been made obsolete by technological change and the emergence of competition. In particular, the costs of the various specialized network components described in the Appendix must be placed in existing accounting categories. In some cases, those assignments will be arbitrary or under the discretion of the LEC, because the accounting systems and rules have not been updated. Furthermore, recent rules and policies that are supposed to ensure reasonably priced services, such as accounting separations and price caps, are simply inadequate to perform all of the difficult tasks required of them.[16]

Problems with individual safeguards are discussed below. The first order of business, however, is to respond to LEC arguments that existing competitive forces are a sufficient safeguard against cross-subsidy.

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[16] Examples of damaging strategies that are more likely to succeed in part because they are more difficult to detect were discussed above. In particular, it was described how LEC control over network architecture can build cross-subsidy and discrimination into the very design of the network. Accounting separations will simply not detect or remedy this sort of cross-subsidy.

A. Emerging Competition Increases the Demand for Regulation

Full competition would, of course, eliminate the ability of a firm to cross-subsidize. However, the basic local exchange telephone business will retain substantial monopoly characteristics for some time to come because only LEC switches and loops connect all subscribers in any given area. Although alternatives for some components of the local exchange are on the horizon, this ubiquity cannot be economically reproduced.

Emerging competition may actually increase the danger of cross-subsidies, as the local telephone company attempts to lower the prices of services potentially subject to competition by raising the prices of services not subject to competition (or by failing to reduce prices that should be reduced). Regulators must respond to the mixture of competitive and monopoly services with appropriate safeguards. Only when all telephone company prices are constrained by the presence of competitive alternatives will the need for regulation be reduced.

The experience with the introduction of long distance competition is instructive. Only after the Commission first authorized competitive entry did it attempt to allocate costs among AT&T's services. Some of these services remained monopolized while others were the object of emerging competition.[17] Prior to the introduction of competition, rate of return review was informal and rate structure issues were of little concern to the Commission.

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[17] Indeed, the introduction of competition was originally viewed by the Commission as a device to help make regulation more effective by constraining AT&T power in at least some markets. See Martha Derthick and Paul J. Quirck, The Politics of Deregulation (1985), p. 60.

B. Price Caps Do Not Eliminate Cross-Subsidy Concerns

It is sometimes argued that alternatives to traditional rate-of-return regulation may dissuade the LECs from engaging in cross-subsidy. In theory, a regulatory scheme that fixes or caps the price of basic local exchange rates over a long time horizon might provide sufficient incentives to discourage cross-subsidy or inefficient over-investment. However, the actual regulatory alternatives that are now being experimented with at the federal level and in many states have a relatively short time horizon and typically include some type of "stabilizer" tied to the carrier's rate of return to prevent profits from becoming too high or too low. These profit reviews and stabilizers are necessary checks on the exercise of market power.

As long as regulators review profitability at the end of some time period, or otherwise put pressure on the carrier to reduce rates (or give refunds) when profits become excessive, LECs will have an incentive to shift costs to telephone ratepayers and away from competitive services.[18] That is, they still have an incentive to subvert the cost allocation process. By doing so, they can shift expenses away from lines of business that face competition. The basket and band system used to constrain rate structure changes does little to address this problem. As customers have noted in Commission tariff proceedings, LECs have used the

[18] Ron Braeutigam and John Panzer, "Diversification Incentives Under 'Price-Based' and 'Cost-Based' Regulation," The Rand Journal of Economics, Autumn '89, pp. 389, point out that the desirable efficiency properties of price caps are unlikely to be realized if the cap is not exogenous.

flexibility inherent in price caps to raise the prices of less competitive services and substantially reduce the prices of more competitive services, without regard to cost.[19]

C. The Commission's Accounting Rules do not Reflect New Competitive and Technological Realities

The Commission's current cost allocation rules are obsolete and incapable of providing adequate consumer safeguards in a Video Dialtone world. Indeed, most of the rules that make up the current cost allocation systems are designed for a telecommunications world that existed twenty years ago. The Appendix to this paper describes near-term and long-term fiber-based architectures and the associated equipment that will be used to provide Video Dialtone.[20] This Appendix demonstrates that if LECs are allowed to provide Video Dialtone services, the network will change substantially. If the rules are not revised to accurately reflect technological and competitive changes, then they will not be adequate to minimize the potential for cross-subsidy.[21] Indeed, as discussed below, the accounting and cost allocation rules themselves may generate undesirable cross-subsidies. These inaccuracies will have real impacts on ratepayer bills.

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[19] See Ad Hoc Telecommunications Users Committee, In the Matter of 1991 Annual Access Charge Tariff Filings, Petition to Reject in Part or, in the Alternative, to Suspend in Part and/or Investigate, filed May 14, 1991, pp. 17-19.

[20] For completeness, the Appendix also describes a copper-based system for the delivery of video services, although the capacity of such systems is insufficient to provide true Video Dialtone.

[21] Moreover, these Rules require effective auditing if they are to accomplish their goals. The U. S. General Accounting Office recently found that the Commission's resources are not adequate to oversee cost allocations. See FCC's Oversight Efforts to Control Cross-Subsidization, February 1993.

1. The Current System is Decades Behind the Times

The heart of the current cost allocation system is the accounting system, or Uniform System of Accounts, in Part 32 of the Commission's Rules. All of the Commission's accounting and cost allocation safeguards flow from these accounts. Both Parts 36 (the Separations Manual) and Sections 64.901 and 64.902 (the Joint Cost Allocation Rules) start with the accounting system as the basis for their cost allocations. Part 69 (the Access Charge Rules) uses the Part 36 framework and its results, which started with Part 32. Therefore, Part 69 is also dependent on Part 32. Each of these Parts of the Commission's Rules are discussed below.

a. Part 32

Part 32 was adopted in 1988, but despite major changes in network technology, the structure of the basic accounts in Part 32 did not change significantly in 1988 from the basic Part 31 accounts which were adopted in 1935. The current Part 32, because of its close mapping to the prior Part 31 basic investment accounts, reflects the same network architecture that underlies the old Part 31.[22] Consequently, it is unlikely that the new Part 32 will accommodate continued technological and competitive changes. As the Appendix demonstrates, broadband video services to the home require a substantially new architecture to deliver telecommunications services. Part 32 must be revised to reflect this new architecture.

[22] For example, the "basic" plant or investment accounts can be mapped between the two systems with a high degree of precision. The amounts may not track exactly because of other changes in accounting such as the adoption of GAAP, in particular the expensing of items that were formerly capitalized, e.g., central office switching software upgrades.

Moreover, the basic elements of the historical network architecture -- loop, trunk, local switch and tandem switch -- are not recorded separately and distinctly in the accounting system, but rather are the product of categorization in the separations process. For example, Part 32 does not have separate accounts for loops and trunks. In other words, interoffice fiber trunk investment and fiber in the loop are recorded in the same USOA account.[23] This obviously gives LECs degrees of freedom as to how costs are ultimately apportioned among service categories.[24]

b. Part 36

Part 36, the Separations Manual, was designed as a "conformed" replacement of the previous Part 67 Separations Manual. When the Accounting System changed in 1988, the Separations Manual also had to change. However, any changes in the Separations Manual allocation rules would have required a lengthy process. The time allowed to implement the new accounting system was exceedingly short. Therefore, no jurisdictional shifts were

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[23] Subsidiary records are kept for metallic and non-metallic cable, but this information is not used by Parts 36, 64 or 69.

[24] This issue is raised in the FCC's Responsible Accounting Officer (RAO) Letter No. 21 of August 8, 1992 regarding the classification of remote central office equipment for accounting purposes. The FCC has attempted to distinguish between the loop electronics (remote concentrator - account 2230 [Part 32], separations [Part 36] category 4.13, interstate access element [Part 69] common line) and central office switching (remote switch - account 2210 [Part 32], separations [Part 36] category 3, interstate access element [Part 69] local switch). If remote concentrator (loop) and remote switching (local switching) equipment are becoming technically more indistinguishable and if the current costing systems (Parts 32, 64, 36 and 69) still require this increasingly artificial distinction, then clearly these artificial distinctions will have potentially significant implications in the access system since they determine who will pay for what.

allowed. There were some efforts at simplification, but as was the case with the revisions to the Uniform System of Accounts, the old and new Separations Manuals are closely related.

c. Part 64

The Joint Cost Rules contained in Part 64, or more accurately, the individual Cost Allocation Manuals (CAMs), starts with the detail as recorded in the accounting system (Part 32) and then splits each Class A account between non-regulated and regulated.[25] This means that Part 64 is not capable of differentiating costs much differently than Part 32, because it uses the same structure and the totals of Part 32 as the starting point. Therefore to the extent that Part 32 is not able to accommodate the changes in the network and the competitive environment, Part 64 suffers from the same problem.

d. Part 69

The Access Charge Manual, Part 69, is and has been predicated on the results of the Separations Manual, both the old Part 67 and the revised Part 36. Part 69 generates access charges based on separations categories. Therefore, to the extent that separations categories do not adequately reflect how services are actually provided, cost misallocations will occur. For example, as discussed below, in the transport proceeding the Commission recognized that substantial expenses are misallocated to the transport category. Clearly, to the extent that Video Dialtone results in major new services, Part 69 must be revised. But just as clearly, the necessary revisions will be problematic if the antecedent changes are not made in Parts 32 and 36.

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[25] Class A accounts are used by companies with more than $100,000,000 in annual regulated revenue.

2. Technical Obsolescence of the Accounting Rules is Generating Anomalous Results

The existing Rules generate several results that are incompatible with protecting ratepayer interests in a Video Dialtone world. Absent Rule revisions, LEC provision of Video Dialtone will likely result in both jurisdictional and service-by-service misallocations. Moreover, the current rules allow the risk of Video Dialtone ventures to be transferred to telephone ratepayers. These problems are discussed below.

a. The Cost of Video Dialtone Capacity Can be Allocated to Other Categories

Basically, all loop facilities are allocated to various message and private line subcategories on the basis of working loops (loops actually in service). This effectively spreads the non-revenue producing costs across all loop subcategories based on revenue producing loops. Therefore, to the extent allowed by a particular regulatory scheme, an LEC will be reimbursed for both revenue producing and non-revenue producing investment. In other words, the LECs' revenue requirements likely include excess capacity that may have been installed in contemplation of competition.

The following hypothetical example demonstrates how this occurs. Total message loop costs of $75,000,000 are apportioned among interstate private line (IS PL), state private line (St PL), and joint subscriber lines according to the number of Working Loops (Wk Loops). If additional loop capacity has been installed in anticipation of competition, but is currently idle, the cost of that capacity is allocated to the Separations categories on the basis of the allocation of working loops. The Joint Subscriber Line category will bear the greatest share of costs because most working loops fall into this category, even though the capacity is intended for Video Dialtone service.

Chart I

Derivation of Message Loop Costs

	Total Loop $	# Wk Loops	Tot$/WkLoop	Allocated $
Total	$75,000,000	150,000	500.00	
IS PL & WATS		2,000		$1,000,000
St PL & WATS		6,000		$3,000,000
Joint Sub Line		142,000		$71,000,000

b. Increases in the Cost of Loops Will be Allocated Primarily to Subscriber Loops

An analogous result occurs if the cost of each loop is higher due to making all loops ready for Video Dialtone. The following chart demonstrates how an increase in total loop costs of 20 percent, with no change in revenue-producing loops, will be reallocated across all subcategories. First, assume that there are 150,000 working loops, each costing $500. This situation is then described by the previous chart. Now assume that each loop costs $600 instead of $500, because the loops have been upgraded to allow video transmission:

Chart II

Allocation of Increased Loop Costs

	Total Loop $	# Wk Loops	Tot$/WkLoop	Allocated $
Total	$90,000,00	150,000	$600.00	
IS PL & WATS		2,000		$1,200,000
St PL & WATS		6,000		$3,600,000
Joint Sub Line		142,000		$85,200,000

Thus, if an LEC puts fiber in the loop primarily for Video Dialtone, and thereby raises the average cost of all loops, the majority of the additional $15 million in fiber loop costs (over

two thirds in this example) would be categorized as joint subscriber line costs and would likely lead to increases in local rates and access charges.

c. The Current Rules Will Allocate Video Dialtone Costs to the Intrastate Jurisdiction

The Commission has already said that the revenues for Video Dialtone service are interstate. However, because the jointly used subscriber loop costs are allocated to the interstate/intrastate jurisdictions on a 25/75 split, the interstate jurisdiction would be allocated 25 percent of the total joint subscriber loop costs and receive 100 percent of the revenues, while the intrastate jurisdiction would be allocated 75 percent of the total joint subscriber loop costs but receive zero percent of the "cost causing" revenues. Therefore, investments made to provide Video Dialtone could put significant pressure on local rates. This is demonstrated in Chart III.

Chart III

Jurisdictional Allocation
(25%/75% of Joint Sub Line)

	Base Case	Add $100/loop	Difference
	A	B	C=B-A
Joint Sub Line	$71,000,000	$85,200,000	$14,200,000
Interstate (25%)	$17,750,000	$21,300,000	$3,550,000
State (75%)	$53,250,000	$63,900,000	$10,650,000

Assuming that the increase in loop costs was caused by Video Dialtone, then as long as Video Dialtone revenues were at least $3,550,000 (the difference in the cost allocation to interstate for the additional investment in the above chart), the interstate jurisdiction would

be "revenue neutral." Notice that the intrastate jurisdiction would be allocated the majority of the costs with no increase in revenues because the revenues have been declared interstate.

d. Relative Usage Allows LECs to Recover Expenses and Investment Associated With Failed Video Dialtone Ventures From Telephone Ratepayers

The relative usage principle on which Separations and Part 64 are based can be viewed as the ultimate keep-whole mechanism. For example, if non regulated usage suddenly drops to zero, the assignment of costs to the non-regulated category (excluding Cable and Wire Facilities and Central Office Equipment) is reallocated to regulated and subsequently reallocated between the interstate and intrastate jurisdiction. Cable and Wire Facilities and Central Office Equipment will be reallocated after three years.

The next chart will introduce an hypothetical base case and then the following chart will demonstrate what happens if non-regulated usage goes to zero.

Chart IV

Allocation of Expenses to the Regulated Category

	Minutes	% Total	% Reg	Total	Allocated
Total	100.00			$1,000	
Non-regulated	5.00	5%			$50.00
Regulated	95.00	95%			$950.00
Interstate	14.25		15%		$142.50
State	80.75		85%		$807.50